**The Everglades: A park in peril**

**Directions:** Carefully read the Everglades National Park poster/map in which you will find answers to the questions below.

**Objective:** Students will be able to describe the Everglades ecosystem and community and describe the factors that threaten the fragile ecosystem.

***Saving the Glades***

1. What bird has come to symbolize the environmental threats to the ‘Glades?
2. When did the peninsula of Florida emerge from the ocean?
3. About how many years ago would the sediments that support plant life in Florida get deposited?
4. What do suspect the term *Everglades* means?
5. What type of ecosystem/climate is the Everglades?
6. What are the two problems with the water control structures that exist outside the park?
7. What major heavy metal haunts all levels of the food web?
8. What animals have been specifically affected?
9. Describe the comprehensive Everglades Restoration Plan.
10. What does the Glades future rest on?
11. What demands have to be balanced?
12. Where does the Everglades watershed begin?

**Summarize the information above into 3-4 sentences.**

***Threats to the Park***

1. **Regional Growth**-
   1. What is the main problem with south Florida development?
   2. Use the formula to calculate the percent change in population since 1960:

**% change** = Final population-Initial population; then multiply by 100 for %

Initial Population

**Show Work:**

1. **The Freshwater Cycle**
   1. Where does the water originate for the Everglades (source & location)?
   2. What adaptation must Everglades plants and animals have to survive?
2. **Demand for Water**
   1. What is an aquifer and how does building roads and building affect it?
   2. How does agriculture affect water runoff?
   3. What are the consequences for saltwater intrusion?
3. **Water Management**
   1. List the 4 management factors critical to the Everglades and its wildlife.
4. **Water Quality**
   1. What is the importance of periphyton in both the wet and dry seasons?
   2. When does saltwater intrusion occur?

***Impact on Plants and Animals***

1. **Wet and Dry Seasons**
   1. How are alligators affected by poorly timed water availability?
   2. How are snail kites and apple snails affected?
2. **Invasive Species**
   1. What invasive species threaten the Florida largemouth bass?

***The Wood Stork as Indicator Species***

1. Explain how human water management upsets Wood Stork feeding and breeding.

**Key to the Color Illustration**

* *For each of the organisms listed in each of the habitats, create an ecological pyramid to show their relationship. Potentially unfamiliar organisms have been labeled producer (P), consumer (C), Herbivore (H), Carnivore (M)*

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| --- | --- | --- |
| **Freshwater Habitat** | **Hardwood Hammock** | **Saltwater Habitat** |
| Wood Stork | Air plant | Great white heron |
| Sawgrass | Gumbo limbo tree | American Crocodile |
| Swamp Lily | Tree snail | Loggerhead sea turtle |
| Bluegill (M) | Barred Owl | Turtle grass |
| Crayfish (M) | White tailed deer | Manatee (H) |
| Florida Gar top (M) | Royal Palm | Mangrove snapper (M) |
| Largemouth bass (M) | Orchid | Blue crab (M) |
| Purple Gallinule (C) | Florida panther | Red Mangrove tree |
| Spatterdock (plant) | Strangler fig tree | Coon oysters (H) |
| Alligator | Strap fern | Brown pelican |
| Ibis (H) |  | Osprey top(M) |
| Snail Kite (bird) top (M) |  | Roseate Spoonbill (M) |
| Apple snail (H) |  | Southern Bald Eagle to (M) |
| Black vulture (M) |  |  |

Freshwater Habitat